

Knight

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INSECT PEST SURVEY BULLETIN

Vol. 13

November 1, 1933

No. 9

THE MORE IMPORTANT RECORDS FOR OCTOBER, 1933

The general situation regarding grasshoppers in the Great Plains has not materially changed since September. However, local outbreaks developed in Nebraska and threatening populations were observed in parts of Nevada and Colorado.

Unusual damage to lawns by the green June beetle was reported in cities in Maryland and Kentucky.

The Asiatic garden beetle is much more numerous on Long Island than it was at this time last year.

A severe outbreak of the wheat wireworm developed late in the season in Vermont.

Populations of chinch bugs in late summer were so extensive that entomologists of the East-Central and West-Central States held a conference during the month to organize for a possible control campaign next spring and summer.

The codling moth situation has not materially changed since our last report, but the San Jose scale has been observed in increasing numbers from the New England States to Georgia and in Wisconsin.

The tomato pinworm is again appearing in troublesome numbers in southeastern Pennsylvania. In addition to damaging tomatoes grown under glass, it heavily infested numerous outdoor plantings.

The pine needle scale has been found unusually abundant from the New England States westward through Ohio to Wisconsin.

During the month the gladiolus thrips was collected for the first time in Colorado.

Serious damage by the tortricid leaf tier Platynota stultana Wals. was reported from a large commercial rose-growing plant in northern Virginia. From 10 to 15 percent of the new growth was damaged. This is apparently the first record of this insect east of Mexico and California.

The screw<sup>worm</sup>/situation in Texas is much more serious than it was last month. Throughout the Gulf coast district this insect is reported as being more abundant than it has been in several years.

Stable flies were so numerous in the northwestern part of Florida that cattle spent the daylight hours in ponds and streams to avoid their bites, which resulted in materially reducing the milk production.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Florida. J. R. Watson (October): Grasshoppers, chiefly Schistocerca americana Drury, are very abundant.
- Illinois. W. P. Flint (October 24): Grasshoppers are relatively scarce. Conditions for egg laying have been very good, but the small numbers of insects present this fall would not lead one to expect serious trouble in 1934.
- Minnesota. A. G. Ruggles (October): Egg surveys show few in the western part of the State, but an increase in the eastern counties. Grasshoppers were "licked" badly in Minnesota this year; conditions are back to nearly normal.
- Mississippi. N. L. Douglas (October 16): The differential grasshopper (Melanoplus differentialis Thos.) is moderately abundant in Yalobusha, Grenada, and Montgomery Counties.
- Nebraska. M. H. Swenk (October 20): A local outbreak of grasshoppers occurred in western Perkins County during the middle of October; the insects were reported to be taking winter wheat in places.
- Utah. G. F. Knowlton (October 18): Grasshoppers are scarce to moderately abundant in northern Utah, where they are laying eggs.
- Nevada. G. Schweis (October 18): Grasshoppers in various portions of western Nevada have been under observation for the past several weeks; oviposition has been heavy. Many of these oviposition areas have been mapped and preparation will be made for early spring control programs.
- Colorado. G. M. List (October): Grasshoppers are moderately abundant in a number of localities. Egg laying will be rather heavy in limited areas in Boulder, Douglas, and Montezuma Counties. If good weather continues, there may be enough eggs deposited in a number of foothill localities to make control measures necessary next season.

WHITE GRUBS (Phyllophaga spp.)

- Maryland. E. N. Cory (October 23): Many reports are coming in with regard to white-grub injury on lawns in various parts of the State. The infestation seems to be quite generally serious on the western shore.
- Kentucky. W. A. Price (October 24): White grubs are very abundant.

GREEN JUNE BEETLE (Cotinis nitida L.)

- Maryland. E. N. Cory (October 9): Found in a lawn at Eccleston, Baltimore County.
- Kentucky. W. A. Price (September 23): Following heavy rains during early September, larvae emerged from lawns in Arcadia Park and crawled on their backs to the street. They were unable to crawl back over the curb stones and were thus trapped. Because of odor coming from the dead ones, the neighbors swept up the dead and living larvae each morning. More than a gallon of these grubs

was removed each day covering a period of 4 days during the week of September 17. (October 24): Larvae of this pest have ruined many lawns in Lexington, particularly where grass cuttings have been thrown in piles near the lawn.

Alabama. J. M. Robinson (October 20): The grubs are very abundant at Clanton where strawberry plants are being destroyed.

JAPANESE BEETLE (Popillia japonica Newm.)

United States. U. S. Dept. Agr. Office of Information, Press Service (October): At Portland, Me., 52 Japanese beetles were captured during the season and at Waterville 139 beetles. At Salamanca, N. Y., 12 beetles were found. A vigorous eradication campaign to exterminate an established infestation is in progress at Erie, Pa. The points in Maryland at which 10 or more beetles were captured include Bethesda, Bladensburg, Chevy Chase, Hyattsville, Riverdale, Silver Spring, and Hurlock. At Keyser, W. Va., the capture of 25 beetles is reported.

Vermont. H. L. Bailey (October 24): The Japanese beetle is scarce. One specimen was found in a trap at Burlington. This was the only one recorded in the northern half of Vermont.

New Jersey. C. C. Hamilton (October 7): Japanese beetle grubs are common and doing damage.

ASIATIC BEETLE (Anomala orientalis Waterh.)

New York. C. H. Hadley (October 23): The Westchester County Farm Bureau agent reports that the oriental beetle is numerous in the southern half of Westchester County.

ASIATIC GARDEN BEETLE (Autoserica castanea Arrow)

Connecticut. W. E. Britton (October 24): This is the first evidence of injury by this beetle in New Haven.

New York. C. H. Hadley (October 23): Grubs are more numerous at Jericho this fall than at this time last year. At Locust Valley we are finding an average of 20 grubs to a square foot in ground that has been cultivated all the season.

WHEAT WIREWORM (Agriotes mancus Say)

Vermont. H. L. Bailey (October 24): Reports have been received of serious damage to potatoes by wheat wireworms in Franklin and Washington Counties. Earlier reports of severe damage to corn in Windham County indicate generally heavy infestation in the State.

CUTWORMS (Noctuidae)

Missouri. L. Haseman (September 22): Adults of the black cutworm (Agrotis ypsilon Rott.) are quite abundant. Variegated cutworms (Lycophotia margaritosa saucia Hon.) are rather abundant and heavily parasitized by a fly.



Kansas. H. R. Bryson (October 24): Cutworms (Feltia ducens Walk.) have been unusually abundant this fall in the vicinity of Manhattan. Individuals were sufficiently numerous to check the growth of new shoots arising from the crowns of alfalfa plants after the crop was mowed in the middle of September. Recent observations following cold nights reveal a large number of dead larvae; and at this writing all have disappeared.

MONARCH BUTTERFLY (Danaus menippe Fab.)

Maryland. E. N. Cory (October 4): A flight of monarch butterflies was located on September 30 at Point Lookout, the southernmost tip of Maryland along the Potomac River. On October 2 the large flight settled at Piney Point near the lighthouse, the keeper of which informed us that the butterflies appeared there annually. This flight took off across the Potomac River on October 4 at 8 a.m. The butterflies came in in the late afternoon in such numbers that the people walking about the grounds of the lighthouse were constantly being struck by the flying butterflies. At 5 o'clock, when the writer was there, the butterflies had begun to cluster on the southern and southeastern sides of cedar trees and locust bushes. A large number were collected, all of which appear to be newly emerged or at least undamaged specimens. F. C. Bishopp (September 13): The monarch butterfly was observed in large numbers on tree trunks near the water in Anne Arundel County, near Annapolis.

Texas. O. G. Babcock (October 21): There was a general southward migration of the monarch butterfly during the week of October 1 to 7. They were common everywhere over the range country and gathered in considerable numbers upon flowers about residences. There are now only a very few left.

A PYRALID (Iachyzancla phaeopteralis Guen.)

Louisiana. C. E. Smith and P. K. Harrison (October 28): The larvae have been very destructive to pasture and other sod grasses over considerable areas of southern Louisiana during September and October. It was first observed in St. James Parish on September 19. Reports have been received that the injury was first noticed about September 1. On October 25, Mr. Callaway reported that large numbers of the moth were present in his parish during the last part of September and entered residences and public buildings in annoying numbers. The larvae continued damaging sodland grasses until about October 15, at which time a good rain occurred. During the latter part of September, a report of severe damage to pasture grasses was received from Dutchtown (Ascension Parish). On the night of September 20, large numbers of the moth were observed hovering over lawns, golf courses, etc., at Baton Rouge. By October 15, larval damage to these sod grasses was in evidence, and by the 20th considerable areas had been completely void of all green growth. The damage has continued and at this time the sods of many lawns and considerable areas of other sodlands appear as dead - nothing green in evidence remains. For several days now a few moths have been issuing from this destructive brood at Baton Rouge.

CEREAL AND FORAGE - CROP INSECTS

WHEAT

WHEAT STEM SAWFLY (Cephus cinctus Nort.)

North Dakota. J. A. Munro (September 28): Several reports of injury have been received from points in McHenry County recently.

CORN

CHINCH BUG (Blissus leucopterus Say)

Ohio. T. H. Parks (October 23): The chinch bug is more abundant than usual. The outstanding <sup>insect</sup> injuries of the year were caused by the codling moth and chinch bug. The months of June and July were very favorable for chinch bugs, which developed a heavy second generation.

Illinois. W. P. Flint (October 24): Fall flights continued during the early part of the month and about 90 percent of the bugs are now in hibernation. The weather was very favorable for hibernation flights, and there will probably be only a moderate winter mortality.

Iowa. C. J. Drake (October 26): The chinch bug situation in Iowa appears very serious. There has been a considerable spread by the adults of both the first and second generations. We expect a further spread again next spring. Biotic conditions have been very favorable for the chinch bug this summer and fall.

Iowa. H. E. Jaques (October): The chinch bug is very abundant in the southeastern corner of the State from Union County eastward and covering the southern two tiers of counties. The insect has also been observed in moderate numbers in the third tier of counties from Warren County eastward.

Missouri. L. Haseman (September 22): Over the northern and northeastern part of the State the situation is very threatening. The chinch bug is more abundant in corn than for many years.

South Dakota. H. C. Severin (October 5): The chinch bug is scarce.

Nebraska. M. H. Swenk (October 21): The chinch bug is moderately to very abundant in southeastern and south-central Nebraska.

Kansas. H. B. Hungerford (October 24): Chinch bugs are moderately abundant; not so abundant as last year.

CORN EAR WORM (Heliothis obsoleta Fab.)

New Jersey. T. J. Headlee and assistants (October 7): The corn ear worm is very abundant.

Ohio. M. P. Jones (October 28): An isolated infestation has developed in several late planted fields in Hocking County. Report from the county agent indicates that at least one of these fields is suffering severe infestation with scarcely any ears free from damage. The worms are still feeding on the dry corn.

- Kentucky. W. A. Price (October 24): The corn ear worm is very abundant on corn and green tomatoes. It continues to be a serious pest on late sweet corn and green tomatoes.
- Wisconsin. E. L. Chambers (September 27): The corn ear worm was worse than normal during the past summer, being very abundant on sweet corn and quite commonly reported on field corn.
- Minnesota. A. G. Ruggles (October): The corn ear worm is very abundant.
- South Dakota. H. C. Severin (October 5): In the small amount of corn we have this year the corn ear worm is extremely abundant.
- Iowa. E. E. Jaques (October): The corn ear worm has been very abundant in the northwestern part of the State and prevalent throughout the entire State.
- Missouri. L. Haseman (September 22): Late sweet corn is rather badly infested in central Missouri. Field corn is less severely damaged than in some years.
- Alabama. J. M. Robinson (October 20): The corn ear worm is moderately abundant on corn at Brewton and Dothan.
- Kansas. H. R. Bryson (October 24): The corn ear worm has been unusually destructive to late sweet corn, kafir heads, tomatoes, and peppers. Late tomatoes were injured more than they have been for several years. The larvae were very abundant in alfalfa fields.
- Oklahoma. C. F. Stiles (October 2): This insect has caused considerable damage to cotton throughout some sections of the State.  
H. C. Young (October 4): The cotton boll worm was more numerous in southeastern Oklahoma during the past season than during any of the recent years. In many fields it caused considerably more damage than the weevil this year.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

- Vermont. H. L. Bailey (October 24): A survey started recently in Chittenden County shows populations of from 2 to 20 larvae per square rod in debris of old cornfields and greater numbers in fields of early-planted corn.
- Massachusetts. A. I. Bourne (October 24): The European corn borer is moderately abundant generally, and is present in greater abundance than last year, particularly in the Connecticut Valley. In a number of home gardens the infestation was severe enough to cause appreciable loss. This record is of interest locally in the Connecticut Valley since it is the first season that any appreciable amount of damage has occurred there.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

- Florida. J. R. Watson (October 25): The fall armyworm is still in evidence, although probably not so abundant as it was in the late summer.
- Mississippi. C. Lyle and assistants (October): The southern grass worm was moderately abundant at Ocean Springs in September.



Missouri. L. Haseman (September 22): Adults of the fall armyworm are quite abundant.

Oklahoma. C. F. Stiles (October 2): The fall armyworm has been reported in several of the western counties and is doing serious damage to the early-sown wheat, especially the wheat near grown-over fence rows and roadsides.

#### ALFALFA

##### ALFALFA WEEVIL (*Hypera postica* Gyll.)

California. A. E. Michelbacher (October 20): Larvae are very difficult to find in the region about Tracy. From 700 sweeps in three different fields only one larva was collected. For the most part few adults were taken, although in one field an average of 13 adults per 100 sweeps was obtained. Larvae and adults are somewhat more abundant in the Pleasanton area. On the 16th an average of 25 larvae and 4 adults were collected per 100 sweeps, in one field, although the count for the district as a whole seemed to be somewhat lower. In the territory about Niles the population has built up some on the fifth crop, which is reaching maturity. The heaviest infestation observed on October 18 showed an average larval count of 200 per 100 sweeps. The average adult count was two.

##### CLOVER LEAF WEEVIL (*Hypera punctata* Fab.)

California. A. E. Michelbacher (October 20): Some adults have been collected in the regions about Tracy, Pleasanton, and Niles. A few larvae have also been taken, and are apparently most abundant about Niles, where I would say that about 10 were gathered per 100 sweeps. This is only an estimate, as no accurate counts were made.

#### COWPEA

##### COWPEA CURCULIO (*Chalcodermus aeneus* Boh.)

Mississippi. C. Lyle (October 23): Serious infestations on cowpeas were recently reported from Ocean Springs, Jackson County, and Walthall in Webster County.

#### FRUIT INSECTS

##### APPLE

##### CODLING MOTH (*Carpocapsa pomonella* L.)

New York. P. J. Parrott (October 23): The codling moth is very abundant in western New York.

Maryland. E. N. Cory (October 21): The codling moth is very abundant.

Ohio. T. H. Parks (October 23): The codling moth is very abundant. This is the worst infestation we have had in many years. Injury persisted throughout September and some worms were entering apples as late as October 5. The months of June and July were very favorable for the codling moth; this permitted a heavy second generation.

Illinois. W. F. Flint (October 24): Codling moths continued to hatch in the central and southern sections of the State during the latter part of September. Very large numbers of the larvae are going into winter quarters in all the orchard sections of the State.

Kentucky. W. A. Price (October 24): The codling moth is very abundant.

South Dakota. E. C. Severin (October 5): The codling moth is very abundant.

Missouri. L. Haseman (September 22): Codling moth damage is severe, especially in the northern part of the State. Pupation in central Missouri ceased by September 5 - 10. Few moths still visit bait pans; worms are no longer entering fruit.

New Jersey. T. J. Headlee and assistants (October 7): The codling moth is very abundant in some sections.

Nevada. G. Schweis (October 18): Injury is more apparent than in the past several years in western Nevada. A survey made recently of several unsprayed orchards shows nearly 100 per cent infestation.

Utah. G. F. Knowlton (October 18): The codling moth is moderately to very abundant in northern Utah, where considerable injury has been done to the light apple crop.

California. E. O. Essig (October 21): The codling moth is moderately abundant. Stewart Lockwood (October 9): The codling moth has been increasing as a pest of both pears and apples. This is due to two factors: Control measures were not applied, and, because of poor returns, great quantities of pears have not been marketed, with a resulting build-up in the population.

A TINEOID MOTH (Lymnaecia phragmitella Staint.)

Massachusetts. A. I. Bourne (September 25): On about September 20 the drop apples in one block of McIntosh were found to be rather badly riddled by the caterpillars of some lepidopterous species. The orchardist had mulched his trees rather heavily with flags which he cut during the summer in a swampy area near his orchard. This species is recorded as one of the most common insects attacking cat-tail. (September 29): This species has been verified by an expert as Lymnaecia, and probably phragmitella Staint.

APPLE LEAF SKELETONIZER (Psorosina hammondi Riley)

Kentucky. W. A. Price (September 23): Specimens of the apple leaf skeletonizer were received from two orchards near Paducah with the statement that they were ruining the trees.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Connecticut. P. Garman (October 24): Apple maggots in apples are apparently as abundant as last year in New Haven County.

Maryland. E. H. Cory (October): A very slight amount of injury has been observed in Washington County.



FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Wisconsin. E. L. Chambers (September 27): The flat-headed apple tree borer has been doing serious injury to neglected apple trees throughout the State this summer.

ROUND-HEADED APPLE TREE BORER (Saperda candida Fab.)

New Hampshire. L. C. Glover (October 26): A heavy infestation was reported from Hinsdale.

ROSY APPLE APHID (Anuraphis roseus Baker)

New York. P. J. Parrott (October 23): Fall migrants of the rosy aphid are very abundant in western New York.

APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

Maryland. E. N. Cory (October 21): The oat aphid was observed returning to apple trees at Hancock on October 18.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Maine. C.O. Dirks (October 31): This aphid is very abundant on apple and mountain ash throughout the State.

APPLE LEAFHOPPERS (Cicadellidae)

Maine. C. O. Dirks (October 31): Typhlocyba pomaria McAtee is not so abundant as it was a year ago in York and Oxford Counties.

Connecticut. P. Garman (October): The second brood of the white apple leafhopper (T. pomaria) failed to develop in injurious numbers in most orchards in New Haven and Hartford Counties.

Maryland. E. N. Cory (October 21): Erythroneura hartii Gill. and other leafhoppers are very abundant.

Missouri. L. Haseman (September 22): A very heavy flight of leafhoppers about lights was observed September 11 at St. Joseph. A week later a heavy flight occurred at Columbia.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Massachusetts. A. I. Bourne (October 24): The San Jose scale has been found on fruit from a number of orchards in various sections of the State. Enough of this has been found this year to give strong indication that the pest is somewhat on the increase in many orchards.

Georgia. O. I. Snapp (October 20): The San Jose scale on peach trees at Fort Valley is more abundant than it was last season. Heavy infestations in some orchards are necessitating an unusually early application of oil emulsion.

Wisconsin. E. L. Chambers (September 27): Despite a 90 per cent winter-killing of the San Jose scale in most sections during the past winter, these insects

are apparently getting well established again, and new infestations have been found by the nursery inspectors in the 12 southern counties now known to have infestations.

#### SCURFY SCALE (Chionaspis furfura Fitch)

North Carolina. Z. P. Metcalf (October 25): The scurfy scale is abundant on apple at Blowing Rock.

#### EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

California. S. Lockwood (October 9): The European red mite was somewhat more than normally abundant in the principal pear-growing sections of the State. This may have been due to the cool, late spring of this year.

#### PEACH

##### PEACH BORER (Aegeria exitiosa Say)

New York. F. J. Parrott (October 23): The peach borer is very abundant.

Georgia. O. I. Snapp (October 20): Moth emergence was practically completed in the field at Fort Valley by September 22, much earlier than usual, and the pupation season started earlier than usual. The insect was less abundant than usual on account of the work of predators in 1932.

Mississippi. C. Lyle (October 23): Complaints of infestations have recently been received from various sections of the State.

Colorado. G. M. List (October): The peach tree borer has increased a great deal in plantings of sour cherry in northern Colorado during the past two seasons. Ordinarily but few of the growers in this section treat for this insect, but this season it is advisable for most of them to use treatment.

##### LESSER PEACH BORER (Aegeria pictipes G. & R.)

Mississippi. C. Lyle (October 23): A grower at Shuqualak in Noxubee County recently reported that his peach trees had been injured.

##### ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Georgia. O. I. Snapp (October 20): Pupation has ceased at Fort Valley; all larvae are now in hibernation.

Ohio. T. H. Parks (October 23): The oriental fruit moth is moderately abundant. Quinces have been ruined and peaches along Lake Erie are moderately infested. There are <sup>no</sup> peaches elsewhere in Ohio this year.

Kentucky. W. A. Price (September 23): The oriental fruit moth has been very scarce in Kentucky throughout the season. It has been impossible to find wilted twig material sufficient to make a satisfactory recovery count in the orchards where Macrocentrus ancylivorus had been liberated last year.

Mississippi. C. Lyle (October 23): Peach twigs showing injury were recently received from Drew, Sunflower County.

PEAR

GRAPE MEALYBUG (Pseudococcus maritimus Ehrh.)

California. S. Lockwood (October 9): Baker's mealybug, P. maritimus, was observed in the Sacramento River Valley on pears in somewhat greater than normal numbers, but was not responsible for much commercial loss.

RASPBERRY

RED-NECKED CANE BORER (Agrilus ruficollis Fab.)

Wisconsin. E. L. Chambers (September 27): The red-necked cane borer has been unusually severe to canes of both red and black raspberries this fall through small fruit-growing sections in the southern half of the State.

Mississippi. C. Lyle (October 25): Young berry canes showing slight injury were recently received from Laurel, Jones County.

GRAPE

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

Missouri. L. Haseman (September 22): The grape leaf folder is very abundant in central Missouri. A late brood of worms matured during the early part of the month.

PECAN

FALL WEBWORM (Hyphantria cunea Drury)

Kentucky. W. A. Price (September 23): The fall webworm is very common on forest and shade trees in the bluegrass area.

Mississippi. C. Lyle (October 23): A grower at Yazoo City recently wrote us that pecan, walnut, and persimmon trees were heavily infested.

Oklahoma. C. F. Stiles (October 2): The fall webworm is very abundant throughout central Oklahoma, especially on pecan, walnut, hickory, and persimmon trees. In some instances practically all of the foliage has been removed from the trees.

TWIG GIRDLER (Oncideres cingulatus Say)

Georgia. O. I. Snapp (October 12): This insect is very abundant in a pecan grove at Marshallville, where it is doing considerable damage.

Missouri. L. Haseman (September 22): The hickory twig girdler is ovipositing and cutting twigs; it is much less abundant than last fall.

Mississippi. C. Lyle (October 23): Considerable injury to pecan trees has recently been reported by correspondents at Columbus in Lowndes County and at Oxford in Lafayette County.

F. L. Bond (October 20): Hickory twig girdlers seem to be unusually abundant in the territory around Wiggins this fall, and considerable damage to pecan trees has been noted in several sections.



## TRUCK - CROP INSECTS

### BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

Alabama. J. M. Robinson (October 20): The banded bean beetle is as abundant at Auburn this year as it was in 1932. It has been feeding on turnips, rape, and other vegetables.

K. L. Cockerham (September 20): Damage to fall Irish potatoes was very severe at Foley.

Texas. F. L. Thomas (October 28): D. balteata was very abundant at Sugarland on young snap beans, October 6.

### FALSE CHINCH BUG (Physius ericae Schill.)

Minnesota. A. G. Ruggles (October 28): This insect is abundant at St. Peter.

Missouri. I. Haseman (September 22): A heavy flight of leafhoppers at St. Joseph, September 11, included some false chinch bugs.

Mississippi. C. Lyle (October 23): The false chinch bug was reported early in October as seriously infesting turnips in a garden at Starville, Oktibbeha County. An investigation showed that the infestation was rather spotted throughout the planting.

### POTATO AND TOMATO

#### TOMATO PIN WORM (Gnorimoschema lycopersicella Busck)

Pennsylvania. C. A. Thomas (October 21): The tomato pin worm has again been found in southern Chester County, where it seems to be well established in a number of greenhouses from Avondale east as far as Brandywine Summit, in Delaware County. Numerous outdoor plantings were found to be infested, and in some the injury was so severe that many of the tomatoes dropped from the vines. The infestation of the greenhouses has so far been less severe. The exact limits of the distribution have not yet been determined. Scarcely any parasitization has been noted.

#### POTATO FLEA BEETLE (Epidrix cucumeris Harr.)

Colorado. G. M. Iist (October): The potato flea beetle has been about normal in numbers in Weld and Morgan Counties, where the chief injury occurs, but apparently has been causing much more worm track on potatoes than usual in El Paso and Montezuma Counties.

#### STRIPED BLISTER BEETLE (Epicauta vittata Fab.)

Florida. J. R. Watson (October 25): Observed defoliating Irish potatoes about Gainesville.

#### TARNISHED PLANT BUG (Lygus pratensis L.)

Kansas. H. R. Bryson (October 22): Tarnished plant bugs were observed causing injury to late potatoes at Manhattan. The tips of the leaves were attacked, causing the tips to have a wilted appearance.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

- New Hampshire. L. C. Glover (October 26): The Mexican bean beetle is moderately abundant. All stages from second-instar larvae to adults were found in the field October 15.
- Massachusetts. A. I. Bourne (October 24): The Mexican bean beetle has spread well over the State generally. In the new sections where it has just appeared it has done considerable damage, chiefly because it caught the growers more or less unprepared. In those sections where it has been established for several years it is no more abundant than last year.
- Connecticut. M. Turner (October 21): Second-generation injury was severe in most of the State. The pest is still increasing in the northeastern section of the State, but is not so abundant as last year in the southwestern part.
- New Jersey. T. J. Headlee and assistants (October 7): The Mexican bean beetle is very abundant.
- New York. P. J. Parrott (October 23): The Mexican bean beetle is moderately abundant in western New York.
- Virginia. L. D. Anderson (October 21): The Mexican bean beetle is very abundant at Norfolk.
- Kentucky. W. A. Price (October 24): The Mexican bean beetle is moderately abundant.
- Alabama. J. M. Robinson (October 20): The Mexican bean beetle is very abundant at Auburn and over the State.
- Tennessee. G. M. Bentley (October 23): The Mexican bean beetle is moderately abundant in Hamilton County, causing heavy damage to isolated patches of late beans.
- Mississippi. C. Lyle (October 23): A correspondent at Blue Mountain, Tippah County, sent larvae to this office on September 26 with a report that they had caused serious damage to late beans.

BEAN LEAFHOPPER (Empoasca fabae Harr.)

- Florida. J. R. Watson (October 25): The bean leafhopper is doing severe damage in the northern and central part of the State, probably more severe than the average at this time of the year.

CABBAGE

HARLEQUIN BUG (Murgantia histrionica Hahn)

- Tennessee. J. U. Gilmore (September 7): This pest was present in large numbers attacking foliage of young turnips in a field of about 1 acre. Most of the turnips were killed and the leaves badly burned on the others.

Missouri. L. Haseman (September 22): Several complaints have been received, but the pest is not so abundant in central Missouri as it was a year ago.

Alabama. J. M. Robinson (October 20): The harlequin bug is moderately abundant at Auburn.

#### CABBAGE WEBWORM (Hellula undalis Fab.)

Mississippi. C. Lyle (October 23): On September 28 a farmer near Starbville in Oktibbeha County brought to this office specimens and reported that they had practically destroyed his fall plantings of turnips, kale, collards, and mustard.

Louisiana. C. E. Smith, P. K. Harrison and Norman Allen (October 28): This webworm has been present in damaging numbers on cole crops throughout October at Baton Rouge.

#### ONIONS

##### ONION THRIPS (Thrips tabaci Lind.)

Colorado. G. M. List (October): The dry warm season has been favorable for the onion thrips. It has done much more than the usual amount of damage in the western part of the State. The yield has been materially reduced in the counties of Mesa, Delta, and Montrose.

#### SWEETPOTATO

##### SWEETPOTATO LEAF BEETLE (Typophorus viridicraneus Crotch)

Alabama. J. M. Robinson (October 20): The sweetpotato leaf beetle is very abundant at Guntersville, where it destroyed 80 percent of a 3-acre field of sweetpotatoes.

#### STRAWBERRY

##### STRAWBERRY LEAF ROLLER (Ancyliis comptana Froel.)

Ohio. E. W. Mendenhall (October 21): The strawberry leaf roller is very bad in strawberry plantations in Miami County and especially in the Brandt locality. This seems to be the third brood.

#### MUSHROOMS

##### SPRINGTAILS (Collembola)

Pennsylvania. C. A. Thomas (October 21): Springtails have been very destructive to newly planted mushroom spawn this fall; probably the most of these entered the mushroom houses with the wet manure. Most of those damaging the spawn have been determined by Dr. Folsom as a species of Proisotoma very close to P. thermophila Axels., perhaps a variety of that species. A slight amount of injury has been done in a couple of mushroom houses near Reading by Lepidocyrtus lanuginosus (Gmel.) Tull., which ate quite large holes into the caps and stems of the growing mushrooms. This is the species that has done considerable damage in previous years in mushroom houses at Barberton, Ohio.



S O U T H E R N F I E L D - C R O P I N S E C T S

PINK BOLL WORM (Pectinophora gossypiella Saund.)

Florida. Bureau of Plant Quarantine News Letter No. 34 (October 1): The daily collection and examination of cotton blooms from the plats at Chapman Field were continued throughout the month, with negative results. From time to time okra and other hibiscus blooms have also been examined. On August 23 two pink boll worm larvae were found in hibiscus blooms. The plant on which the insect was found is a hybrid, Hibiscus rosa-sinensis. Immediately after this finding, two inspectors began an intensive examination of hibiscus blooms, and at this time 10,000 have been inspected without any further specimens having been found. It would therefore appear that there was no general infestation in hibiscus.

BEAN THRIPS (Heliothrips fasciatus Pers.)

California. E. O. Essig (September 22): Bean thrips are abundant and injurious to cotton in San Joaquin Valley (Merced County) where plants were in need of soil moisture.

F O R E S T A N D S H A D E T R E E I N S E C T S

FALL CANKER WORM (Alsophila pometaria Harr.)

Vermont. H. L. Bailey (October 24): On October 18 the first female adults of fall canker worms were noted at Burlington, where damage by larvae was heavy in spring.

GIANT APHID (Lophostilpnus carvae Harr.)

New York, New Jersey, and New England. E. P. Felt (October 27): The giant aphid was reported as extremely abundant on lindens at Lawrence, L. I., and on oak in eastern New England and at West Orange, N. J.

ASH

CARPENTER WORM (Prionoxystus robiniae Peck.)

North Dakota. J. A. Munro (October): In a survey carried on during the summer by A. C. Fox, the carpenter worm was found at Kloten on ash, at Williston, Sentinel Butte, Belfield, Hebron, and Medina, on green ash, and at Fargo on ash, soft maple, and American elm.

Nebraska. M. H. Svent (October 20): The carpenter worm was reported damaging ash trees in Boone County on October 7.

BIRCH

BRONZE BIRCH BORER (Agrilus annius Gory)

Wisconsin. E. L. Chambers (September 27): White birch trees throughout the State have suffered severely from attack this summer. Many of the trees

have been killed outright; these were apparently first weakened by severe drought. Poplar trees also were found in nurseries showing some injury from this pest.

### BOXELDER

#### BOXELDER BUG (Leptocoris trivittatus Say)

- Pennsylvania. E. P. Felt (October 23): The boxelder plant bug was reported as swarming on buildings at Lancaster.
- Ohio. T. H. Parks (October 23): Boxelder plant bugs were more abundant in September than usual and entered some houses.
- Wisconsin. E. L. Chambers (September 27): Numerous reports are coming in from many sources that the boxelder bug is becoming quite a nuisance and extremely abundant.
- Minnesota. A. G. Ruggles (October 23): Boxelder bugs are worse than at any time in the last 30 years.
- South Dakota. H. C. Severin (October 5): Boxelder bugs are more numerous at the present time than they have been for many years.
- Missouri. L. Haseman (September 22): Boxelder bugs are very abundant throughout the State.
- Nebraska. M. H. Swenk (October 20): Many complaints of boxelder bugs causing annoyance by congregating in large numbers on the south sides of buildings were received during the period from October 3 to 20, inclusive. These reports came from Cass, Sarpy, Lancaster, Cuming, Saline, Hamilton, Adams, Franklin, and Harlan Counties.
- Kansas. H. B. Hungerford (October 24): Boxelder bugs are unusually abundant over all eastern Kansas.
- Oklahoma. C. F. Stiles (October 2): The boxelder bug is causing serious damage to boxelders in the vicinity of Stillwater and Duncan.

### ELM

#### A BARK BEETLE (Scolytus multistriatus Marsh.)

- New York and Connecticut. E. P. Felt (October 23): Specimens of the elm bark beetle were received from Glenham and Haverstraw, N.Y. (October 31): I have received a report of the occurrence of the insect at New Milford, Meriden, and Naugatuck, Conn.

#### ELM SCURFY SCALE (Chionaspis americana Johns.)

- California. H. J. Ryan (October 21): This scale was found on a block of about 200 small American elms in a Los Angeles County nursery, where the stock was destroyed.

OAK

TWO-LINED CHESTNUT BORER (Agrilus bilineatus Web.)

Delaware and New York. E. P. Felt (October 27): Work by the two-lined chestnut borer in both oak and beech was noted at Wilmington, Del., beech limbs here and there being killed by this insect. There is also a serious infestation of oaks by this species at Manhasset on Long Island, N. Y.

PIKE

HARTUCKET PINE SHOOT MOTH (Phryganonia frustrana Comst.)

Pennsylvania. E. P. Felt (October 23): The Hارتucket pine moth has been unusually abundant and injurious to the tips of hard pines in the vicinity of Philadelphia.

Maryland. E. W. Cory (September 26): The Hارتucket tip moth is reported attacking pine at Jessups. (Det. by G. S. Langford).

A PINE SHOOT MOTH (Phryganonia risidana Fern.)

Connecticut. W. Turner (October 19): A 2-acre forest plantation of Pinus resinosa in Mansfield, in the northern part of the State, has been seriously injured. (Det. by G. H. Plumb.)

WHITE-PINE NEWIL (Pissodes strobi Peck)

Wisconsin. E. L. Chambers (September 27): Many white pine trees have been disfigured in several areas in northern Wisconsin this summer.

ABBOT'S SAWFLY (Diprion abbotii Leach)

Minnesota. A. G. Ruggles (October 23): This sawfly is destroying white pine needles in Minneapolis.

LECONTE'S SAWFLY (Neodiprion lecontei Fitch)

Florida. J. R. Watson (October 25): The Leconte sawfly is working in many parts of the State, and many complaints have been received of its depredations within the last month.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Connecticut. W. Turner (October 19): This scale is unusually abundant on larch pine and red pine in all nurseries.

Ohio. E. W. Mendenhall (October 19): The pine leaf scale is found quite prevalent on pines and occasionally on spruces in Ohio.

Wisconsin. E. L. Chambers (September 27): The pine leaf scale is becoming abundant in numerous ornamental plantings in the southwestern counties and is abundant on some trees in spots on wild woodlands, attacking evergreen of all species.



Colorado. G. M. List (October): The pine leaf scale is more abundant this season than usual. Inquiries have been received from many sections of the State, indicating that it is doing considerable damage in ornamental plantings, and trees that have been brought from the mountain area for inspection show that there has been an increase under these conditions.

HTHOCK SCALE (Aspidiotus abietis Schrank)

Wisconsin. E. I. Chambers (September 27): The black pine leaf scale appeared in large numbers on jack pine over a considerable area of forest land in Portage and Adams Counties this summer for the first time.

SCOTCH PINE SCALE (Toumeyella numismatica P. & McD.)

Wisconsin. E. I. Chambers (September 27): Jack pine plantings in several of our northwestern counties have been seriously injured by the Scotch pine scale, resulting in the death of many trees.

COMMON RED SPIDER (Tetranychus telarius L.)

Nevada. G. Schweis (October 18): Injury to cottonwoods near Mina was reported recently. The letter of transmittal stated that the trees were covered from top to bottom.

SPRUCE

SPRUCE BUDWORM (Mormoloba funiferana Clem.)

Wisconsin. E. I. Chambers (September 27): Several sections of mixed timberland in Douglas County have been seriously injured this summer and many trees were killed. All varieties of evergreens were attacked in northwestern Counties.

TULIP TREE

TULIP TREE SCALE (Toumeyella liriiodendri Gmel.)

Kentucky. W. A. Price (September 23): Badly infested trees were found at Frankfort, California, and Lexington.

INSECTS AFFECTING GREENHOUSE

AND ORNAMENTAL PLANTS

CHINESE MANTIS (Tenodera chinensis Sauss.)

Michigan. R. Hutson (October 3): A single female specimen has been sent in from Monroe.

GARDEN FLEA HOPPER (Ealticus citri Ashm.)

Pennsylvania and Maryland. F. F. Smith (September): The garden flea hopper was found in injurious numbers on gailardia, hollyhock, and other ornamentals in

gardens near Chester, Pa., and in a 2-acre dahlia field at Media. It was also stippling chrysanthemums in a greenhouse at Suitland, Md.

MITES (Tarsonemus spp.)

General. F. F. Smith (September): The broad mite, Tarsonemus latus Bks., was injuring dahlias in a field and Gerbera plants in a greenhouse at Media, Pa. Apparently the mites moved from the Gerbera to the dahlias in the early spring during the period that the dahlia cuttings were being made, and were later taken to the field. Apparently this is a new State record. An undescribed Tarsonemus was associated with T. latus on dahlias in this infestation. The mite was also found associated with T. pallidus Bks. on specimens of Delphinium belladonna sent in from Kingsford, Me. Infestations of this species alone, and apparently not associated with pallidus or latus, were found on chrysanthemum leaves at Baltimore, Md., Alexandria, Va., and in the District of Columbia; also on Delphinium belladonna in a field at Suitland, Md. Chrysanthemum leaves are injured on the lower surface, then become bronzed and brittle, much as when injured by T. pallidus. On delphinium the blackening and dying of leaves appears very pronounced, but there is no marked leaf or flower-bud distortion like that caused by T. pallidus. This mite also apparently survived the winter and summer on delphinium.

Washington. W. W. Baker (September): Terminal shoots of nettle (Urtica) collected at Puyallup were found to be heavily infested with mites, which appear to be T. pallidus.

ALTHEA

A COREID (Corizus hyalinus Fab.)

Mississippi. C. Lyle (October 23): Specimens were received from a grower at Jackson, Hinds County, on September 25 with a report that they were heavily infesting seed pods of althea.

CHRYSANTHEMUM

CHRYSANTHEMUM LEAF MINER (Napomyza chrysanthemi Kowarz)

Mississippi. C. Lyle (October 23): Injury to chrysanthemums was reported from Meridian in Lauderdale County on October 14.

MEXICAN MEALYBUG (Phenacoccus gossypii Towns. and Ckll.)

Virginia and Maryland. H. H. Richardson (September): Early in September a very severe infestation was found at Alexandria, Va., on a crop of approximately 27,000 chrysanthemums. Further investigations show that this pest is very generally distributed around this section as well as around Baltimore, Md., being found usually on chrysanthemums.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

North Carolina. Z. P. Metcalf (October 25): The euonymus scale is very abundant in various parts of the State.

FERN

FERN SCALE (Hemichionaspis aspidistrae Sign.)

Mississippi. C. Lyle (October 23): Fern fronds showing heavy infestations were received recently from Oxford in Lafayette County, Picayune in Pearl River County, and Ellisville in Jones County.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips gladioli Moul. and Steinw.)

Florida. J. R. Watson (October 25): Found in small numbers in Polk County on volunteer gladiolus that went through the summer.

New York. P. J. Parrott (October 23): The gladiolus thrips is moderately abundant.

Colorado. G. M. List (October): The gladiolus thrips was found in Colorado this season for the first time. Several garden plantings in Fort Collins were so badly injured that few blossoms were cut. It was not found in any commercial plantings.

LILIES

A BULB THRIPS (Liothrips vaneeckei Priessn.)

Washington. R. Schopp (September): An infestation was reported in a lily planting about 4 miles south of Olympia. A light infestation was found in the Lilium columbianum planting. The stock had come from bulbs collected in the vicinity of Olympia. Bulbs of L. washingtonianum and L. umbellatum growing nearby did not appear to carry the infestation.

NARCISSUS

NARCISSUS BULB FLY (Merodon equestris Fab.)

Washington. C. H. Martin (September): During the last week of September bulbs were found in which larvae had burrowed lengthwise through the neck. The full-grown larvae were lying in the neck part of the bulbs, as larvae are found in spring when ready to leave the bulbs. Apparently none had left the bulbs.



OLEANDER

POLKA DOT WASP MOTH (Syntomeida epilais Walk.)

Florida. J. R. Watson (October 25): The polka-dot wasp-moth is causing trouble in the southern part of the State as it often does at this time of the year, defoliating oleanders.

PACHYSANDRA

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Connecticut. E. P. Felt (October 23): The oyster-shell scale was abundant on Pachysandra at Greenwich.

PRIVET

PRIVET THRIPS (Dendrothrips ornatus Jabl.)

New York. E. P. Felt (October 23): The privet thrips is abundant and injurious to privet at Ossining.

RHODODENDRON

RHODODENDRON WHITEFLY (Dialeurodes chittendeni Laing.)

Washington. C. F. Doucette (September): A very few scattered larvae and a considerable number of empty pupa cases were found in Seattle. It was apparent that the new brood is very much smaller than that of last year, which came on the imported plants.

AN AMBROSIA BEETLE (Corthylus punctatissimus Zimm.)

Connecticut. E. P. Felt (October 23): The pitted ambrosia beetle was reported as injuring rhododendrons at Greenwich.

ROSE

A TORTRICID (Platynota stultana Wlsm.)

Virginia. C. A. Weigel (September): A tortricid leaf tier was found injuring 10 to 15 percent of the new growth on approximately 100,000 roses in a greenhouse range at Alexandria. The larvae draw two leaves together, or fold over the edges of individual leaves, usually severing the petioles of the leaflet and causing it to die. Some feeding takes place on the inner side of the folded leaf; also flower buds are sometimes eaten into on the side and tender growths are cut off. According to August Busck, this is the first record of this species outside of Mexico and California, where it is a serious pest of oranges, roses, and peppers, and occurs on other plants.

ROSE SAWFLY (Caliroa aethiops Fab.)

Tennessee. Agricultural Extension News Service, Univ. of Tenn. (May 29): The rose slugs are very numerous and are doing much damage. Where the slugs are present on rose bushes the leaves look scorched.

I N S E C T S   A T T A C K I N G   M A N   A N D  
D O M E S T I C   A N I M A L S

MAN

MOSQUITOES (*Culicinae*)

Florida. J. R. Watson (October 25): Following the hurricane of September, mosquitoes were very abundant, but with the drier weather they are gradually thinning out. Their rise in numbers followed the hurricane in a very few days.

Texas. E. W. Laake (October 24): *Anopheles* spp. and the yellow fever mosquito (*Aedes aegypti* L.) have been very abundant in Dallas during October. An unusual number of cases of malarial fever have been contracted in Dallas during the month.

FUSS CATERPILLAR (*Megalopyge opercularis* S. & A.)

Mississippi. C. Lyle (October 23): Larvae were received recently from Liberty in Anite County and Ludlow in Scott County, the sender in each case reporting that a person had been severely stung.

Texas. E. W. Laake (October 24): The stinging caterpillar has been quite abundant over central, northern, and northeastern Texas. No complete defoliation of trees has been observed, but many trees of Dallas and other cities have assumed a ragged appearance during the month as a result of the feeding of numerous larvae. The Dallas City Forestry Department sprayed several thousand trees in the State Fair grounds, and, according to the report of the City Forester of Fort Worth, over 20,000 gallons of spray was used on shade trees in that city. Numerous cases of stings by this caterpillar have been reported in Dallas and other cities in the affected area.

F. L. Thomas (October 28): Very abundant in Ft. Worth, Dallas, and other points in northern Texas on hackberry and oak especially. Also recorded on redbud and peach.

CRINKLED FLANNEL MOTH (*Logoa crispata* Pack.)

SADDLE-BACK CATERPILLAR (*Sibine stimulea* Clem.)

North Carolina. Z. P. Metcalf (October 25): The saddle-back caterpillar and the flannel moth caterpillar are very abundant on ivy at Windsor, and are stinging people.

Alabama. J. M. Robinson (October 20): The flannel moth is very abundant at Andalusia. Several members of one family were stung.

SAND FLIES (*Culicoides* spp.)

Georgia. W. E. Dove and D. G. Hall (September 29): Two species of sandflies which normally occur only during the summer months, *C. dovei* Hall and *C. melleus* Coq., are very annoying and abundant at Savannah.

EUROPEAN EARWIG (Forficula auricularia L.)

Massachusetts. A. I. Bourne (October 10): I have just received a letter reporting the occurrence of the European earwig in Randolph, in the eastern part of the State, not far from the Rhode Island border.

DOG FLEA (Ctenocephalides canis Curt.)

Vermont. H. L. Bailey (October 24): Serious infestations of dog fleas in houses were reported at Montpelier and Brandon.

RAT FLEA (Ceratophyllus fasciatus Bosc.)

Alabama. J. M. Robinson (October 20): The rat flea is very abundant at Clio. It is also very abundant in southeastern Alabama, causing many active cases of typhus fever.

CATTLE

SCREW WORM (Cochliomyia macellaria Fab.)

Mississippi. C. Lyle and assistants (October): Southern Mississippi seems to have a very heavy infestation of screw worms this fall. Numerous complaints come from all sections of the Wiggins territory. Some farmers state that sheep raising will soon be a thing of the past if the screw worm continues.

Texas. E. W. Laake (September): Rains during August and early September in various sections of the southern and southwestern parts of the State have made conditions ideal for the development and activity of the screw worm. As compared with other months of this season, screw worm cases in domestic animals have more than doubled in most of these areas during September. In the Edwards Plateau region, which is primarily a sheep and goat country and where shearing was under way during the entire month, an accurate record on approximately 70,000 domestic animals of all classes showed an increase of nearly 200 per cent in the number of screw worm cases as compared with the number of cases recorded for the same number of animals during any other month of this season. Shear cuts were partly responsible for the high screw worm incidence in sheep and goats, but other classes also showed an increase of almost 100 percent in the number of cases of myiasis during September. In the Gulf coast section screw worms were reported to be more abundant this fall than at any other time in several seasons. Stockmen along the coast in Jackson County reported a 35 percent infestation in their cattle and calves.

STABLE FLY (Stomoxys calcitrans L.)

Georgia. W. E. Dove (September 29): On the islands and along the coast this species has become very abundant and annoying.

Florida. W. V. King (October 6): Very large numbers of the stable fly, or "dog fly" as it is known in Florida, have been reported from some localities of the northwestern coast section of Florida. A correspondent writes of swarms of these flies which run cattle into the lakes, creeks, and bayous, close up summer resorts, etc. "Dairies have their production lowered from 20 to 50 per cent in a week's time. Pensacola Beach is practically ruined after



the beginning of the dog-fly season. It is absolute torture to stay in the open if you are at all quiet during this period. Fishermen many miles from shore have difficulty in staying out during a land breeze. Bathers are particularly attractive, the pest preferring to feed on a wet skin, and one must keep all of one's body immersed continuously or be bitten by these voracious pests."

Iowa. W. G. Bruce (October 30): Flies are still annoying stock at Ames.

A BUFFALO GNAT (Simulium venustum Say)

Minnesota. A. G. Rugeles (October 23): S. venustum is very abundant on moose in Lake County.

HORSE

HORSE BOTFLIES (Gastrophilus spp.)

Florida. F. D. Sanders (September): Eggs were observed in considerable numbers on the legs, chins, and flanks of the cavalry horses on the University Farm, Gainesville.

Iowa. E. F. Knipling (October 30): Flies of G. intestinalis DeG. and G. nasalis L. were emerging from soil, out of doors, October 30 at Ames. Previous to October 28 the last observation of the activity of the flies was on October 4. Four thousand eggs of G. intestinalis, from 17 head of horses, yielded an average viability of 48.18 percent.

Utah. G. F. Knowlton (October 23): Botfly eggs on the legs were fairly abundant on a few horses examined at Hyde Park.

BUFFALO GNATS (Simuliidae)

Utah. G. F. Knowlton (October 23): Simuliidae are generally present in the ears of horses in northern Utah at this time.

A HORSE FLY (Tabanus costalis Fab.)

Georgia. W. E. Dove and D. G. Hall (September 29): The horse fly T. costalis, in a second emergence this season, has become a severe pest of man and animals in the vicinity of salt marshes. The species normally occurs during the months of May and June.

H O U S E H O L D   A N D   S T O R E D - P R O D U C T S

I N S E C T S

TERMITES (Isoptera)

United States. T. E. Snyder (October): During the month 211 cases of termite damage werereported as follows: New England 7; Middle Atlantic 82; South Atlantic 26; East Central 30; North Central 3; West Central 19; Lower Mississippi 12; Southwest 13; and Pacific Coast 11.

Mississippi. C. Lyle (October 23): Many complaints of injury to houses have been received during the past month from every section of the State. Winged adults were found emerging from the baseboard in a living room at Meridian, Lauderdale County.

A TENEBRIONID (Tribolium madens Charp.)

Minnesota. A. G. Ruggles (October 23): T. madens was found in lumber at Oxboro Heath.

CEDAR BARK BEETLE (Phloeosinus dentatus Say)

New Jersey. E. P. Felt (October 23): The cedar bark beetle was reported as injuring rustic furniture at Montclair.

CARPET BEETLE (Anthrenus scrophulariae L.)

Illinois. W. P. Flint (October 24): Numerous reports have been received of damage by carpet beetles, the numbers exceeding the average for this time of year.

PEA WEEVIL (Bruchus pisorum L.)

Oregon. A. O. Larson (September 25): The pea weevil was still laying eggs in the field on September 19 at Cannon Beach Junction and in a laboratory at Corvallis on September 25.

CHESTNUT WEEVILS (Curculio spp.)

Ohio. E. W. Mendenhall (October 18): The chestnut weevils (C. proboscideus Fab. and C. rectus Say) are very abundant in the southeastern part of the State. The grubs are very noticeable from the holes they make when they leave the chestnuts for pupation.

HIDE BEETLE (Dermestes vulpinus Fab.)

Ohio. T. H. Parks (October 23): A serious outbreak is occurring in a packing house in Columbus. The larvae and beetles are in cured hams and in the timbers of one of the rooms.

MISCELLANEOUS STORED GRAIN PESTS

South Dakota. H. C. Severin (October 5): A terrific outbreak of stored grain insects occurred over the State in general. Insects concerned are principally the granary weevil (Sitophilus granaria L.), saw-toothed grain beetle (Cryzaophilus surinamensis L.), square-necked grain beetle (Cathartus quadricollis Guér.), and confused flour beetle (Tribolium confusum Duv.).

Colorado. G. M. List (October): The more common practice of carrying over grain, which has been followed the last two or three years, apparently has been responsible for a marked increase in stored-product insects, the granary weevil being the most common one reported. Many small holdings of grain are being badly damaged.

ANTS (Formicidae)

Mississippi. C. Lyle (October 23): Specimens of Solenopsis molesta Say, which were reported as abundant in a kitchen, were received from a correspondent at Churky in Newton County on October 11. Specimens of Monomorium pharaonis L. were recently received from Greenwood in Leflore County and from Monticello in Lawrence County with reports that they were very troublesome in kitchens. Camponotus herculeanus pennsylvanicus DeG. was reported on September 25 as abundant on the porch of a home at Meridian in Lauderdale County.

Kentucky. W. A. Price (October 24): Very large swarms of Lasius claviger Roger have occurred in yards during the past two weeks in Lexington and Mt. Sterling.

COCKROACHES (Blattidae)

District of Columbia. P. D. Sanders (October 9): Complaints have come from several large department stores in Washington of cockroaches eating the black water paint from sign cards in their shop windows. Trap collections in one of these stores showed Blatta orientalis L. to be more numerous than Blattella germanica L.

MITES (Tyroglyphus sp.)

Mississippi. C. Lyle (October 23): Mites, identified by E. W. Stafford as belonging to the genus Tyroglyphus, were abundant on scrapings from cured meat received from a correspondent at Vicksburg in Warren County on September 30.

INSECT CONDITIONS IN COSTA RICA DURING JULY - SEPTEMBER 1933

C. H. Ballou, San Jose, Costa Rica

(Unless otherwise indicated, observations were made at San Pedro de Montes de Oca)

COCCIDAE

Aspidiotus camelliae Sign. was reported attacking pear on September 20.

Orthezia insignis Doug. was observed on Thunbergia erecta at Santiago on July 30.

ALEYRODIDAE

Aleurocanthus woglumi Ashby was found during September and early October on avocado, kamquat, lime, lemon, sweet orange, pitanga, citron, coffee, katenbilla, ylang ylang, and grapefruit. They were killing sweet orange trees at San Jose. The parasite Eretmocerus serius Silv. was observed ovipositing in larvae, but subsequent dissections discovered no parasite larvae, and it is believed that the heavy rains prevented mating of the parasites.

Aleurothrixus howardi Q. was found during August and September on citron, lime, sweet orange, and lemon.



CICADELLIDAE

Aulacizes panamensis Fowl. was found on pear July 8. (Det. S. C. Bruner.)

Cicadella molicella Fowl. was reported on grass September 24.

Cicadella occatoria Say was collected during July, August, and September on apple, casuarina, chिकासquil, lantana, phlox (Phlox drummondii), crotalaria, targua, mielcillo, fig, New Zealand spinach, and parsnip.

Cicadella satelles Fowl. was seen on Tabernaemontana bignoniaceflora September 24. (Det. S.C.B.)

Deltoccephalus flavicosta Stal was observed on bean on September 22. (Det. S.C.B.)

Euscelis bicolor Van D. was noted on dahlia September 15. (Det. S.C.B.)

Gypona scarlatina Fitch var. vimula Stal (Det. S.C.B.) was found on quince at El Pisote.

Kolla fasciata Walk. was collected on madagascar periwinkle, zinnia, and grass during August and September.

Oncometopia undata Fab. was found during July, August, and September on dahlia, casuarina, targua (Croton sp.), apple, persimmon, ketembilla (Dovyalis hebecarpa), lemon, lime, mombin, mulberry, peach, pepper, bean, and "vainilla" (Cassia sp.).

FULGORIDAE

Colgorma proxima Fowl. was observed on mombin August 27.

CERCOPIDAE

Epicranion champion Fowl. was collected during late July, August, and early September on apple, peach, and pear.

Monecphora postica Walk. was found during late August and all of September on geranium, periwinkle, crotalaria, Mentha sativa L., and Italian rye grass.

MEMBRACIDAE

Membracis humilis Fowl. was seen on ylang ylang at Santiago July 30.

APHIDIIDAE

Aphis illinoisensis Shim. was very injurious to vinifera grapes during late August and September at San Pedro de Montes de Oca and Alajuela.

Aphis pomi DeG. was very abundant and injurious during August and September on apple, peach, plum, loquat, and pear. The predator Cycloneda sanguinea L. was observed feeding on this species.

## HETEROPTERA

The pentatomid Acrosternum marginatum P. de B. was found on casuarina at Paso Ancho de San Sebastian September 30. (Det. S.C.B.)

Archinerus scutellaris Stal was observed on jaral (Calea urticifolia axillaris (DC.) Blake.) at Paso Ancho de San Sebastian.

Dist.

Corecoris giganteus was noted on violet September 15.

Cyrtobeltis notatus Dist. was found on tomato September 30.

Edessa salvini Dist. (Det. S.C.B.) was seen on targua July 6.

Oncopeltus fasciatus Dall. was found on Madagascar periwinkle September 23. and on milkweed (Asclepias curassavica). (Det. S.C.B.)

Thyanta perditor Fab. was very abundant and injurious to zinnias, portulaca, and crotalaria during late August and early September.

## COLEOPTERA

Cerotoma rogersi Jac. was destroying bean plants and covering the fruit of calabazo amargo (Lagenaria leucantha) at Santiago on July 30, and was found on cowpeas at Santiago on July 30.

Diabrotica fulvicornis Jac. was observed on poro (Erythrina rubrinervia) September 23 and 26.

Eurhinus festivus Fab. was found on coffee September 24.

Homocotelus jansonii Cr. was injurious on sweet orange July 6.

Hyperaspis centralis Muls. was hunting on ylang ylang September 21.

Nicentrus lineicollis Boh. was found in flowers of daisy September 9.

Pseudobaris undulata Say was observed on jaral at Santiago, July 30.

## LEPIDOPTERA

Automeris boucardi Dr. was seen on churristata (Ipomoea spp.) July 6.

During August Leucinodes elegantalis Guen. was very injurious in fruit of tree tomato, destroying it.

Phobetrus hipparchia Cramer was found on annato and poro August 9 and September 9.

## DIPTERA

Anastrepha striata Schiner was feeding on flowers of avocado September 7.

INSECT CONDITIONS IN PUERTO RICO DURING JULY AND AUGUST 1933  
San Juan Plant Quarantine Office.

COLEOPTERA

A large number of adults of Haltica jamaicensis Fab. (Det. H. S. Barber) and Haltica occidentalis Suffr. (Det. H.S.B.) were found on weeds and verbena at Pennelas and Loiza August 1-8. (R. G. Oakley)

A few adults of Cryptolaemus montrouzieri Muls. (Det. E. A. Chapin) were caught August 18 on Scirpus validus at Ponce. (R.G.O.)

LEPIDOPTERA

Adults of Anticarsia gemmatilis Hbn. (Det. W. Schaus) were numerous on cowpea leaves at Loiza August 7. (C. G. Anderson.)

Cannas were badly damaged by the larvae of Calpodēs ethlius Cram. (Det. W.S.) at Mayaguez. An adult was reared. (A. G. Harley.)

A heavy infestation of larvae of Diaphania hyalinata L. was eating the leaves in one-eighth acre of yantia at Adjuntas. An adult was reared.

Larvae of Xanthopastis antillium Dyar (Det. W.S.) were stripping the leaves of a lily (Hymenocallis sp.) at Mayaguez on July 15. An adult was reared.

HEMIPTERA

Adults of Mormidea angustata Stal. (Det. H. G. Barber) were numerous on the flower stalks of crotalaria at Manati August 15. (C.G.A.)

A heavy infestation of adults and nymphs of Phthia picta Drury (Det. H.G.B.) were preventing tomatoes from growing and ripening properly at Bayamon on August 22. There were five or six plants in this garden. (A. S. Mills.)

HYMENOPTERA

Adults of Zatropis denteris Cwfd. (Det. A. B. Gahan) were reared from galls on leaves of guava at Bayamon August 12. (C.G.A.)



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